UNITED STATES PATENT AND TRADEMARK OFFICE

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c/o WALDER INTELLECTUAL PROPERTY LAW, P.C.			
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Please find below and/or attached an Office communication concerning this application or proceeding.

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 09/838,420
Filing Date: April 19, 2001
Appellant(s): BAUCHOT ET AL.

Stephen J. Walder, Jr.
<u>For Appellant</u>

EXAMINER'S ANSWER

This is in response to the appeal brief filed May 17, 2005.

(1)   Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2)   Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly

affect or be directly affected by or have a bearing on the decision in the pending appeal

is contained in the brief.

(3)   Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4)   Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection

contained in the brief is correct.

(5)   Summary of Invention

The summary of invention contained in the brief is substantially correct, however

the Office provides the following characterization of Appellant's subject matter:

Office Note

Appellant's alleged inventive subject matter describes the grouping of boolean

variables that are to be used as variables within spreadsheet formulas. As with any

variable, the value assigned to each of these boolean variables may be changed (i.e.,

"managed"). Such a change ultimately affects the resultant value of any spreadsheet

cell that references a formula containing any of these "managed" boolean variables.

The associated integer value of the boolean variable (True=1, False=0) turns on/off any

portions of a formula which reference those variables via a multiplication operation (e.g.,

0 * formula_portion = 0, turning off that portion of the formula). Refer to page 18 of the

"as-filed" specification or paragraph [0057] of US Patent Application Publication

2002/0007372 for further details.

(6) *Issues*

The appellant's statement of the issues in the brief is correct.

(7) *Claims Appealed*

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) *Prior Art of Record*

Kelly, Julia, Using Microsoft Excel 97, 3rd Edition, Que Corp., Indianapolis, IN, (c) 1998,

pp. 124-131, 138-144, 154-189, 209-210 and 337-343.

Deitel, H. M., et al., C++: How to program, 2nd Edition, Prentice Hall, Upper Saddle

River, NJ, (c) 1994, pp. 10, 106-110, 147, 243-244, 256-262, 448, 473-479, 483-485,

707-730, 981-987 and 1043-1045.

Microsoft Computer Dictionary, 4th Edition, Microsoft Press, Redmond, WA, (c) 1999,

pp. 29, 56-58, 79, 229, 272, 420 and 434.

Documentation Supplied with this Communication

Note that the Office has supplied the following documentation to in order to point

out the definition that one skilled in the art uses for the terms "constant" and "formula"

when referring to spreadsheet cell types. This material comes directly from the glossary

of the Kelly reference (i.e., the primary reference), is attached as Exhibit A, and is cited

as follows in an accompanying PTO Form 892:

> Kelly, Julia, Using Microsoft Excel 97, 3rd Edition, Que Corp., Indianapolis, IN,
> (c) 1998, pp. 561 and 563.

(9)   Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly
claiming the subject matter which the applicant regards as his invention.

Claim 11 is rejected under 35 U.S.C. §112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

Applicant regards as the invention.

Regarding claim 11 (line 1), the term/phrase "computer usable medium" was

not defined in the specification. This is not a term readily understood in the art, and as

such, the scope of this claim is indeterminable.

Claim Rejections - 35 USC § 101

35 U.S.C. §101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of
matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the
conditions and requirements of this title.

Claim 11 is rejected under 35 U.S.C. 101 because the claimed invention is

directed to non-statutory subject matter. This claim is directed to a "computer usable

medium", which may encompass an intangible embodiment (such as a carrier wave or

transmission media). Since claim 11 is not limited to tangible embodiments, the claim is

therefore non-statutory

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set
forth in section 102 of this title, if the differences between the subject matter sought to be patented and

the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-11 are rejected under 35 U.S.C. §103(a) as being unpatentable over Julia Kelly (<u>Using Microsoft Excel 97, 3rd Edition</u>, Que Corp., Indianapolis, IN, © 1998, pp. 138-144 and 154-189, hereafter referred to as "Kelly") in view of H. M. Deitel et al. (<u>C++: How To Program, 2nd Edition</u>, Prentice Hall, Upper Saddle River, NJ, © 1994, pp. 10, 106-110, 147, 243-244, 256-262, 448, 473-479, 483-485, 707-730, 981-987 and 1043-1045, hereafter referred to as "Deitel"). The <u>Microsoft Computer Dictionary, 4th Edition</u>, Microsoft Press, Redmond, WA, © 1999, pp. 29, 56-58, 79, 229, 272, 420 and 434, hereafter referred to as " MS Dictionary", has also been used to supply definitions for various computer terms.

Regarding independent claim 1, Kelly discloses:

A method of processing user defined boolean variables in a multi dimensional spreadsheet comprising a plurality of cells identified by a cell address along each dimension (p. 175 Fig. 10.23), *said method comprising the steps of:*

defining one or a plurality of boolean variables (pp. 174-175 "IF" section and Fig. 10.23, re: use of nested IF formula) *..., whereby said boolean variables are managed* (pp. 174-175 "IF" section and Fig. 10.23, re: use of nested IF formula. It is implied that any variables used within an application program are managed by that application program.);

referencing said one or plurality of boolean variables in one or a plurality of cells; (p. 174 "IF" section, 1st sentence discussing the determining of a cell value based on criteria) *and*

determining the content of said cell or plurality of cells, wherein each of said boolean variables can be set as "True" or "False;" and impact the content of a cell within an electronic spreadsheet. (pp. 174-175 "IF" section and Fig. 10.23)

However, Kelly does not explicitly disclose:

>... *in a table ...;*

Deitel, though, discloses:

>... *in a table ...;* (pp. 258-259 Fig. 4.22 re: multidimensional array of integers in context of. p. 109 1st full paragraph discussion of representing booleans as integers. Note that MS Dictionary discusses the well known use of arrays to implement tables)

It would have been obvious to one of ordinary skill in the art at the time of the invention to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato, because to do so would enable a programmer to build reusable software components, as taught by Deitel in the 2nd paragraph on p. 10 after "Portability Tip 1.1". These references were all applicable to the same field of endeavor, i.e., application program use and development.

Regarding claim 2, which is dependent upon claim 1, the limitations of claim 1 have been previously addressed.

However, Kelly does not explicitly disclose:

>*assigning a name and storing in the table said name;*
>*selecting a status value; and*
>*storing in the table said status value.*

Deitel, though, discloses:

>*assigning a name* (p. 721 Fig. 14.21 code line 25) *and storing in the table said name;* (p. 721 Fig. 14.21 code lines 26-27)

> *selecting a status value;* (p. 721 Fig. 14.21 code lines 17-18) *and*
> *storing in the table said status value.* (p. 721 Fig. 14.21 code line
> 21)

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato,

because to do so would enable a programmer to build reusable software components,

as taught by Deitel in the 2nd paragraph on p. 10 after "Portability Tip 1.1". These

references were all applicable to the same field of endeavor, i.e., application program

use and development.

Regarding claim 3, which is dependent upon claim 1, the limitations of claim 1

have been previously addressed.

However, Kelly does not explicitly disclose:

> *updating in the table the status value boolean variables.*

Deitel, though, discloses:

> *updating in the table the status value boolean variables.* (p. 722
> Fig. 14.13 and p. 724 Fig. 14.14 illustrates updating variables)

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato,

because to do so would enable a programmer to build reusable software components,

as taught by Deitel in the 2nd paragraph on p. 10 after "Portability Tip 1.1". These

references were all applicable to the same field of endeavor, i.e., application program

use and development.

Regarding claim 4, which is dependent upon claim 1, the limitations of claim 1

have been previously addressed.

Kelly further discloses:

> *computing the value of said cell or plurality of cells according to the value of said one or plurality of boolean variables.* (pp. 174-175 "IF" section and Fig. 10.23)

Regarding claim 5, which is dependent upon claim 1, the limitations of claim 1

have been previously addressed.

Kelly further discloses:

> *changing in the table the name of one or a plurality of boolean variables.* (p. 186 Fig. 10.35 "Define Name" dialog box can be used to assign/change a name in "Names in workbook" text field and select/update status values in "Refers to text field")

Regarding claim 6, which is dependent upon claim 1, the limitations of claim 1

have been previously addressed.

However, Kelly does not explicitly disclose:

> *setting the status value of the boolean variable to "true"; or*
> *setting the status value of the boolean variables to "false.*

Deitel, though, discloses:

> *setting the status value of the boolean variable to "true"; or*
> *setting the status value of the boolean variables to "false.* (p. 109,
1st full paragraph)

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato,

because to do so would enable a programmer to build reusable software components,

as taught by Deitel in the 2nd paragraph on p. 10 after "Portability Tip 1.1". These

references were all applicable to the same field of endeavor, i.e., application program

use and development.

Regarding claim 7, which is dependent upon claim 1, the limitations of claim 1

have been previously addressed.

However, Kelly does not explicitly disclose:

> *setting the value of the boolean variable to one when the status*
> *value is "true"; or*
> *setting the value of the boolean variable to zero when the status*
> *value is "false".*

Deitel, though, discloses:

> *setting the value of the boolean variable to one when the status*
> *value is "true"; or*
> *setting the value of the boolean variable to zero when the status*
> *value is "false".* (p. 109, 1st full paragraph discussing "false", where by
> implication if the value were zero, then it must have been set to zero at
> some time.)

It would have been obvious to one of ordinary skill in the art at the time of the

invention to apply the teachings of Deitel for the benefit of Kelly in view of Ammirato,

because to do so would enable a programmer to build reusable software components,

as taught by Deitel in the 2nd paragraph on p. 10 after "Portability Tip 1.1". These

references were all applicable to the same field of endeavor, i.e., application program

use and development.

Regarding claim 8, which is dependent upon claim 1, the limitations of claim 1

have been previously addressed.

Kelly further discloses:

> *wherein said steps of assigning a name, changing the name,*
> *selecting a status value, updating the status value are executed by means*
> *of an interactive user interface.* (p. 186 Fig. 10.35 "Define Name" dialog
> box can be used to assign/change a name in "Names in workbook" text
> field and select/update status values in "Refers to text field")

Regarding claim 9, which is dependent upon claim 8, the limitations of claim 8

have been previously addressed.

Kelly further discloses:

> *wherein said interactive user interface comprises a dialog box*
> *displayed on a screen of a computer system.* (p. 186 Fig. 10.35)

Claim 10 is directed to a system comprising the means for implementing the method set forth in claim 1. As such, claim 10 is substantially similar to claim 1, and therefore likewise rejected.

Claim 11 is directed to a computer usable medium comprising instructions for implementing the method set forth in claim 1. As such, claim 11 is substantially similar to claim 1, and therefore likewise rejected.

(11) Response to Argument

Beginning on p. 7 of the Appeal Brief (hereinafter "the Brief"), Appellant presents the following issues, which are accordingly addressed below.

a. "Rejections of Claim 11 under 35 USC §112, Second Paragraph" (pages 7-9, argument A of the Brief)

Appellant first asserts that the terminology "computer-usable medium" is well known in the art, and therefore the rejection of claim 11 under 35 USC §112, 2nd paragraph is inappropriate. Appellant further provides examples of Appellant's interpretation of this terminology to include, inter alia, "floppy disks, hard disks, magnetic tape, CD-ROMs, DVD-ROMs, carrier waves, transmission media and the like".

First of all, it is noted that no evidence exists within the "as-filed" specification to support Appellant's definition. In fact, the terminology does not appear within the "as-filed" specification at all. One could fairly interpret "computer usable media" as a desk top, a person's lap, air (e.g., used to cool a microprocessor), electricity, paper (having code embedded thereon, and for scanning into a computer), and a person's voice (spoken to provide input, for example). Secondly, one has to ask: How usable? Directly or indirectly usable? Furthermore, Appellant's own interpretation (characterizing CD-ROMs and carrier waves as "like") is further evidence that this terminology is overbroad. CD-ROMs are tangible and carrier waves are intangible, and thus not "like" media. This terminology is therefore vague, and thus renders the claim indefinite.

Appellant further argues for the classification of carrier waves and transmission media as being tangible media and thus statutory under 35 USC §101. The Office addresses this argument in the ensuing section concerning 35 USC §101 issues.

b. "Rejection of Claim 11 under 35 USC §101" (pages 9-11, argument B of the Brief)

Regarding claim 11, Appellant argues for the classification of carrier waves and transmission media as being tangible media and thus statutory under 35 USC §101. As support, Appellant asserts the MPEP passage stating "When functional descriptive

material is <u>recorded</u> on some computer-<u>readable</u> medium, it becomes structurally and

functionally interrelated to the medium and will be <u>statutory in most cases</u> since use of

technology permits the function of the descriptive material to be realized." See MPEP

2106 (IV)(B)(1).

The Office first notes that Appellant's cited passage requires a "recording".

Carrier waves are transitory phenomena and thus do not <u>record</u> the functional

descriptive material discussed in this passage. Secondly, the language used is notably

not the "computer-<u>usable</u> medium" claim terminology that Appellant asserted comprises

carrier waves and transmission media. The Office notes that "computer usable

medium" is broader in scope than "computer readable medium". Third, the cited

passage also clearly indicates that even claiming functional descriptive material on a

computer-readable medium does not guarantee that the claim will be statutory.

Appellant has repeatedly stated (via amendment, after final, and appeal brief

submissions) that Appellant's intention is to claim an intangible embodiment, such as a

carrier wave or transmission medium. A signal is nonstatutory even if it has a physical

existence, because it is not tangible physical matter. Non-tangible physical phenomena

are not the types of subject matter which were intended to fall within the scope of

patentable subject matter under 35 USC §101.

It is further noted that Appellant's computer usable medium claim may fairly

encompass paper (nonstatutory abstract idea) and voice (nonstatutory intangible

subject matter) as other examples of computer usable media.

Under current policy, the Office requires a tangible embodiment for a claim to be

statutory under 35 USC §101. For at least this reason, the rejection of claim 11 under

35 USC §101 is proper.

c. "Rejection of Claims 1-11 under 35 USC §103(a)" (pages 11-17, argument C of the Brief)

Pages 12-13: Regarding Claims 1, 10 and 11, Appellant asserts that Kelly

teaches the use of an IF-THEN-OTHERWISE function, but not the use of boolean

variables in a table.

The IF-THEN-OTHERWISE function of Kelly illustrates a boolean implementation

embedded within an IF statement construct. In order to make a determination as to

"whether a condition is met", a boolean variable value must have been established (i.e.,

set, unset or "managed", to use Appellant's lingo). This is inherent/implicit in computer

operations. A variable, represented by an address space, has been assigned a value

and that value is evaluated for a certain condition in the teachings of Kelly. This is

implicitly/inherently (i.e., as an underlying computer science concept) taught by Kelly.

Additionally, the mere choice of the data type that one uses to declare a variable is purely a matter of obvious design choice. For instance, in [0057] of Appellant's published Application US 2002/0007372, Appellant describes a formula construct in which variables set/unset to turn on/off part of a formula (e.g. year_end value is set to 1 to turn on the year end discount). Merely declaring year_end as an integer and setting to either 0 or 150 (or declaring as a real number and setting to either 0.0 or 0.1), results in alternative design choices that would have accomplished the same end result (whether or not a condition, meriting the application of a price discount, is met). The Office notes that these are the sort of trade offs that are considered in every properly developed computer project.

Pages 12-13: Regarding Claims 1, 10 and 11, Appellant further alleges that Deitel and the Microsoft Computer Dictionary do not teach the use the use of boolean variables in a table.

The Appellant mischaracterizes the Office's reliance on Deitel. Deitel is cited for its teachings that tables and Booleans are well known in the art. By showing that these concepts are well known in the art, the Office counters that these references do teach the use of boolean variables, which may be represented by 1's and 0's, in a table. Furthermore, Appellant's discussion of operators is irrelevant to the issues at hand.

Additionally, it is noted that a contiguous grouping of cells in Excel (i.e., the subject matter of the Kelly reference entitled Using Excel 97, 3rd Edition) is inherently/implicitly a table. For instance, refer to the "Lookup table" for Fig. 10.22

shown on page 174, comprised of a table of variables A through F, being managed or

set to an integer value 0 through 90. Note also the Office's previous comments that

selection of data types is merely a matter of obvious design choice.

Pages 14-15, Regarding claims 2-9, Appellant alleges that these claims are

patentable because of the alleged deficiencies in cited art previously asserted by

Appellant.

The Office respectfully disagrees with Appellant's assertions for the reasons

presented above.

Page 15, Regarding claim 2, Appellant alleges that Deitel and Microsoft

Dictionary do not teach the recited limitations.

The Office respectfully disagrees with Appellant's assertions. Deitel clearly

shows the well known concepts of assigning and storing of name and status values, it

being merely a matter of obvious design choice as to how one implements a desired

group sets of variables.

Additionally, it is inherent/implicit that each of these limitations would have been

performed to construct the "Lookup table" of Fig. 10.22 on p. 174 of Kelly. Column K of

the Lookup table shows names stored in a table (A though F), it being inherent/implicit

that the name was "assigned". Column J of the Lookup table shows the stored status

values associated with the stored names, it being implicit that these values were selected.

Page 15: Regarding claim 3, Appellant alleges that Deitel and Microsoft Dictionary do not teach the recited limitations.

The Office respectfully disagrees with Appellant's assertions. Appellant clearly misunderstands the purpose of 35 USC §103(a) and apparently has misread or misunderstands the recited limitation. Deitel clearly shows the well known concept of updating a variable status value, it being merely a matter of obvious design choice as to the data type of a variable and how one implements a desired group of sets of variables (e.g., via tables). The recited Fig. 14.13 clearly shows updating of values. Fig. 14.14 shows a tabular presentation of those updated values. The use of a particular data type is merely a matter of obvious design choice.

Furthermore, the Deitel description of Random Access Files provides low level implementation details as to a storage format for variables (i.e., Deitel discloses variable storage) and subsequent presentation in tabular format. Appellant is again incorrect in asserting irrelevancy. It is noted that Appellant claims storage in a table, but one skilled in the art realizes that what is actually occurring is that data is being stored and then presented in tabular format. Therefore, Dietel is indeed relevant prior art.

Additionally, it is inherent/implicit that each of these limitations would have been performed to construct the "Lookup-table" of Fig. 10.22 on p. 174 of Kelly. Column K of the Lookup table shows names stored in a table (A though F), it being inherent/implicit that the name was "assigned". Column J of the Lookup table shows the stored status values associated with the stored names, it being implicit that these values were selected. Spreadsheets are analytical tools, and it is well known that cell "status" values may be edited (i.e., updated). If cell status values could not be updated, spreadsheets would be rendered useless as an analytical tool.

Page 16: Regarding claim 4, Appellant alleges that Kelly does not teach computing the value of a cell or plurality of cells according to the value of one or a plurality of Boolean values.

As previously stated by the Office, the IF-THEN-OTHERWISE function of Kelly illustrates a boolean implementation embedded within an IF statement construct. In order to make a determination as to "whether a condition is met", a boolean variable value must have been established (i.e., set, unset or "managed", to use Appellant's lingo). This is inherent/implicit in computer operations. A variable, represented by an address space, has been assigned a value and that value is evaluated for a certain condition in the teachings of Kelly. This is implicitly/inherently (i.e., as an underlying computer science concept) taught by Kelly.

Additionally, the mere choice of the data type that one uses to declare a variable is purely a matter of obvious design choice. For instance, in [0057] of Appellant's

published Application US 2002/0007372, Appellant describes a formula construct in

which variables set/unset to turn on/off part of a formula (e.g. year_end value is set to 1

to turn on the year end discount). Merely declaring year_end as an integer and setting

to either 0 or 150 (or declaring as a real number and setting to either 0.0 or 0.1), results

in alternative design choices that would have accomplished the same end result

(whether or not a condition, meriting the application of a price discount, is met). The

Office notes that these are the sort of trade offs that are considered in every properly

developed computer project.

Additionally, it is noted that a contiguous grouping of cells in Excel (i.e., the

subject matter of the Kelly reference entitled <u>Using Excel 97, 3rd Edition</u>) is

inherently/implicitly a table. For instance, refer to the "Lookup table" for Fig. 10.22

shown on page 174, comprised of a table of variables A through F, being managed or

set to an integer value 0 through 90. Note also the Office's previous comments that

selection of data types is merely a matter of obvious design choice.

<u>Page 16: Regarding claim 5, Appellant alleges that Kelly does not teach</u>

<u>changing the name in a table of one or a plurality of boolean variables.</u>

Appellant clearly misunderstands the material presented by the Kelly reference.

First of all, the cited passage clearly shows the naming of constant value cells. One

skilled in the art understands that a "constant" value cell in spreadsheet jargon is a cell

that does not contain a formula (and therefore may contain a text or integer value, for

example). See the Kelly glossary entries for constant (p. 561) and formula (p. 563) that have been provided with this Communication. It is further noted that Appellant's "boolean variables" merely employ the well known concept of associating the text value "True" with the integer value 1, and the text value "False" with the integer value 0.

Additionally, it is noted that a contiguous grouping of cells in Excel (i.e., the subject matter of the Kelly reference entitled <u>Using Excel 97, 3rd Edition</u>) is inherently/implicitly a table. For instance, refer to the "Lookup table" for Fig. 10.22 shown on page 174, comprised of a table of variables A through F, being managed or set to an integer value 0 through 90. Furthermore, the names (A through F) presented in the Lookup table of Kelly's p. 174 Fig. 22 were each implicitly changed from nothing (or NULL) to A through F. It is merely a matter of obvious design choice as to what one names a variable and whether one chooses to change that name.

<u>Page 16: Regarding claims 6-9, Appellant alleges that features similar to claim 1 are not taught by the references.</u>

The Office respectfully disagrees with Appellant's assertions for the reasons presented above, especially in the discussion of claim 1.
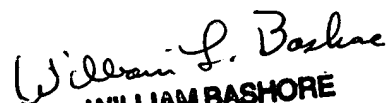
For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Robert Stevens

Robert Stevens
July 25, 2005

Conferees

William L. Bashore
WILLIAM BASHORE
PRIMARY EXAMINER
7/25/2005

Heather Herndon

Stephen Hong

STEPHEN HONG
SUPERVISORY PATENT EXAMINER

IBM CORP. (WIP)
c/o WALDER INTELLECTUAL PROPERTY LAW, P.C.
P.O. BOX 832745
RICHARDSON, TX 75083

Exhibit A

(marked as pages A-1 through A-4)

Kelly, Julia, <u>Using Microsoft Excel 97, 3rd Edition</u>, Que Corp., Indianapolis, IN, (c) 1998, pp. 561 and 563.